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ABSTRACT

The relationship between declining scores on national standardized tests and grade inflation is explored. Grade inflation refers to the indicated measure of evaluation of student performance having higher placement than is usual based on the performances. Data for this study were taken from the American College Testing (ACT) Program Class Profile Report for Freshmen, using the National Norms 10% Sample, the Tennessee State Composite, and the Memphis State University-Enrolled samples. Data were available beginning with 1967-68, with some missing years for some samples. Tennessee high school students showed an increase in grade point average (GPA) of 34 points in the 10 years from 1969-70 to 1978-79 and the percentage of students with GPA above 3.5 rose from 16% to 29%. ACT score means dropped two full points from 19.1 to 17.1 during the 1969-70 to 1975-76 period, and since then, they have fluctuated in the 17.4 to 17.6 area. A similar trend was seen for Memphis State University students. Observation of the most recent 3 years showed that previous movements have stopped or reversed, with some slight increases in ACT scores in 1981-82, and no apparent dramatic change in GPA for high school students. Three data tables and three graphs are provided. (SLD)

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Relationships of Declining Test Scores and Grade Inflation

by
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Paper presented at the Mid South Educational Research Association Annual Meeting in Lexington, Kentucky, November, 11-13, 1981

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The trend toward lower scores since 1964 on the standardized tests that are common across America has been well publicized.

> No topic related to the programs of the College Board has received more public attention in recent years than the unexplained decline in scores earned by students on the Scholastic Aptitude test.

So stated Sidney Marland who was serving as president of the College Board in October 1975 (4). This concern led to an Advisory Panel on the Scholastic Aptitude Test Score Decline that was supported jointly by the College Board and Educational Testing Service. The panel sought "to consider the matter of the SAT score decline and assist in the development of an understanding of it" (4).

As a part of the above referenced study, a number of other studies and reports were undertaken and later published separately. One of these was "Correlations of SAT Scores with High School Record", by Rex Jackson. Jackson's study was precipitated by questions about the extent to which emphasis at the high school level may be placed on skills that are not measured by tests like SAT. If it is true that schools now give more emphasis on other kinds of skills and tend to reward achievements dependent on skills not measured by SAT, then some decline in the relationship between the SAT and the measure of high school performance would be expected. Jackson's study however did not substantiate such a presumption. He found a continuing correlation of around .500 for the years 1971 through 1976 (2).

A similar study was conducted by the American College Testing Program. Both studies used the Student Descriptive Questionnaire to gather data with. The ACT study generally corroborated Jackson's SAT study (5).

Many higher education institutions use not only a standardized test score from such as SAT, ACT, CAT, or other similar achievement or aptitude tests for admission purposes, but also use these scores in conjunction with a high school grade point average (HSGPA). Memphis State University during part of the time included in this study used an ACT score of 16 or a lesser ACT score considered with specific HSGPA's. In 1972, this requirement was ACT=15 and HSGPA of 2.25, or ACT 14 and HSGPA of 2.50. In a study of the relationships between ACT scores and HSGPAs as predictors of college scores, Ray Smith found that students who had entered on ACT=15 and HSGPA=2.25 and ACT=14 and HSGPA=2.50 had performed better than the group of students who had entered based on ACT scores from 16 to 19 (5).

Since high school grades have been used in conjunction with standardized test scores as prediction of success in college, it seems appropriate to examine HSGPAs more closely, expecially in light of recent concerns about grade inflation.

Grade inflation refers to the indicated measure of evaluation of student performances having higher placement than is usual based on the performances. There is an inferred relationship to the normal curve distribution in that inflated grades would represent a skewness to the normal curve. Some writers have felt that the advent of criterias-referenced tests has contributed to grade inflation because their use is typically to determine mastery of specified objectives (3). Milton and Edgerly said of grades,

> our numerous deliberations about grading led repeatedly back to several basic facts: unidemensional symbols report multidimensional phenomena. A given grade can reflect level of knowledge, attitudes, procrastination, or lack of it, and other factors. The lone symbol specifies none of these things---. The symbol, but itself, reveals nothing about the quality of the tests through which it has been derived (3).

With an awareness of the concern about grade inflation and also the publicity that had been given to the long term decline of test scores, the writer proposed to examine relationships between ACT scores and HSGPAs for selected years for three population groups. The data for the study were taken from reports provided by the American College Testing Program Services in their series "The High School Profile Report", also referred to as the 'ACT Class Profile Report For Freshmen". Three data sets were used: The National Norms 10% Sample (9), The Tennessee State Composite (7), and Memphis State University-Enrolled (8). Data were available beginning with 1967-68 for Memphis State University Freshmen, except for two years, 1971-72 and 1977-78. The data for these two years do not appear to be critical to the conclusions drawn regarding the relationship between ACT scores and HSGPAs. These data are shown in Table I and in Figure 1.

The data taken from the Tennessee State Composite begin with 1969-70 and also have two years omitted because of the data not being available. Again, the direction of the trend lines is so marked that the absence of these two years does not appear to be critical. These data are shown in Table II and in Figure 2.

Data from the National Norm 10% Sample are shown in Table III and in Figure 3, although they are not complete enough to clearly reveal direction setting trends.

Each data set has notable features, such as the National Norm 10% Sample data showing that 31% of the population has a GPA between 3.50 and 4.00 in 1980-81. The National Norm Sample also shows that in 1979-80 the participants had a HSGPA of 3.00, up from 2.90 in 1975-76.

TABLE I

ACT TEST SCORE MEANS AND HIGH SCHOOL GRADE POINT
AVERAGE MEANS OF MEMPHIS STATE FRESHMEN

YEAR	ACT MEAN	ACT SCORES 26-36	H.S.GPA MEAN	PERCENT GPA 3.50 to 4.00
67-68	19.8	9	2.45	11%
68-69	19.5	8	2.51	11%
69-70	19.7	6	2.55	11%
70-71	19.4	6	2.59	12%
71-72	NA	NA	NA	NA
72-73	19.8	11	2.67	16%
73-74	19.1	6	2.74	16%
74-75	19.9	11	2.83	21%
75-76	19.4	8	2.91	25%
76-77	18.5	7	2.86	23%
77-78	NA	NA	NA	NA
78-79	17.8	7	2.84	22%
79-80	17.8	6	2.83	20%
80-81	17.9	7	2.83	20%

FIGURE 1

ACT TEST SCORE MEANS COMPARED WITH HIGH SCHOOL GPA FOR MEMPHIS STATE FRESHMEN

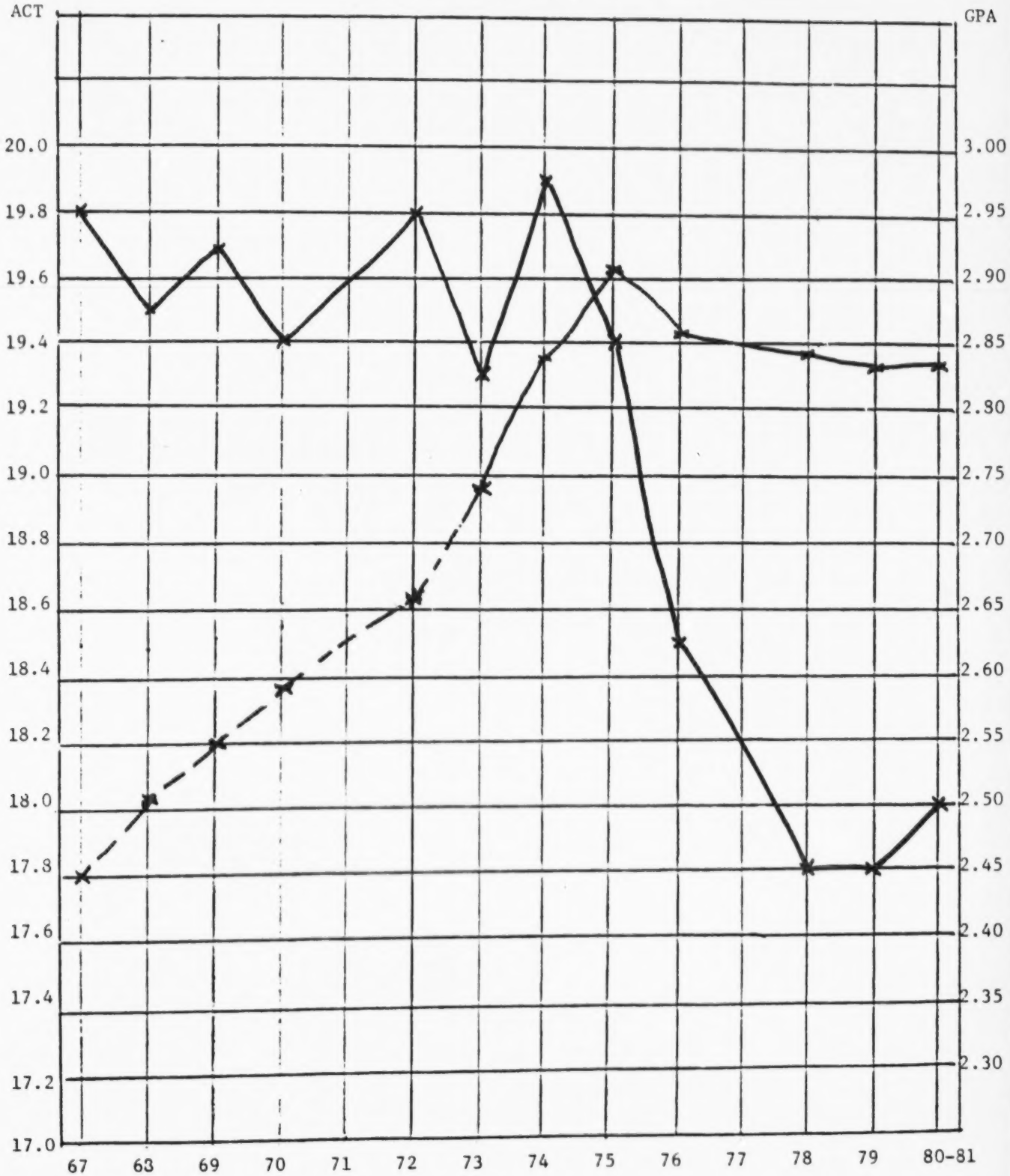


TABLE II

ACT TEST SCORE MEANS AND HIGH SCHOOL GRADE POINT
AVERAGE MEANS OF TENNESSEE HIGH SCHOOL STUDENTS

YEAR	ACT MEAN	ACT SCORES 26-36	H.S.GPA MEAN	PERCENT GPA 3.50 to 4.00
69-70	19.1	11	2.60	16%
70-71	18.4	12	2.63	15%
71-73	NA	NA	NA	NA
73-74	18.1	11	2.80	22%
74-75	17.5	10	2.86	24%
75-76	17.1	9	2.88	26%
76-77	17.4	10	2.92	27%
77-78	17.5	10	2.93	28%
78-79	17.6	10	2.94	29%
79-80	17.5	10	2.91	27%
80-81	17.5	10	2.90	27%

TABLE III

ACT TEST SCORE MEANS AND HIGH SCHOOL GRADE POINT
AVERAGE MEANS OF A 10% NATIONAL SAMPLE OF HIGH SCHOOL STUDENTS

YEAR	ACT MEAN	ACT SCORES 26-36	H.S.GPA MEAN	PERCENT GPA 3.50 to 4.00
75-76	18.7	14	2.90	27%
76-77	18.5	14	2.95	29%
77-78	18.6	14	2.97	30%
78-79	18.7	14	2.99	31%
79-80	18.9	14	3.00	32%
80-81	19.5	18	2.97	31%

FIGURE 2

ACT TEST SCORE MEANS COMPARED WITH HIGH SCHOOL GPA FOR
TENNESSEE HIGH SCHOOL STUDENTS

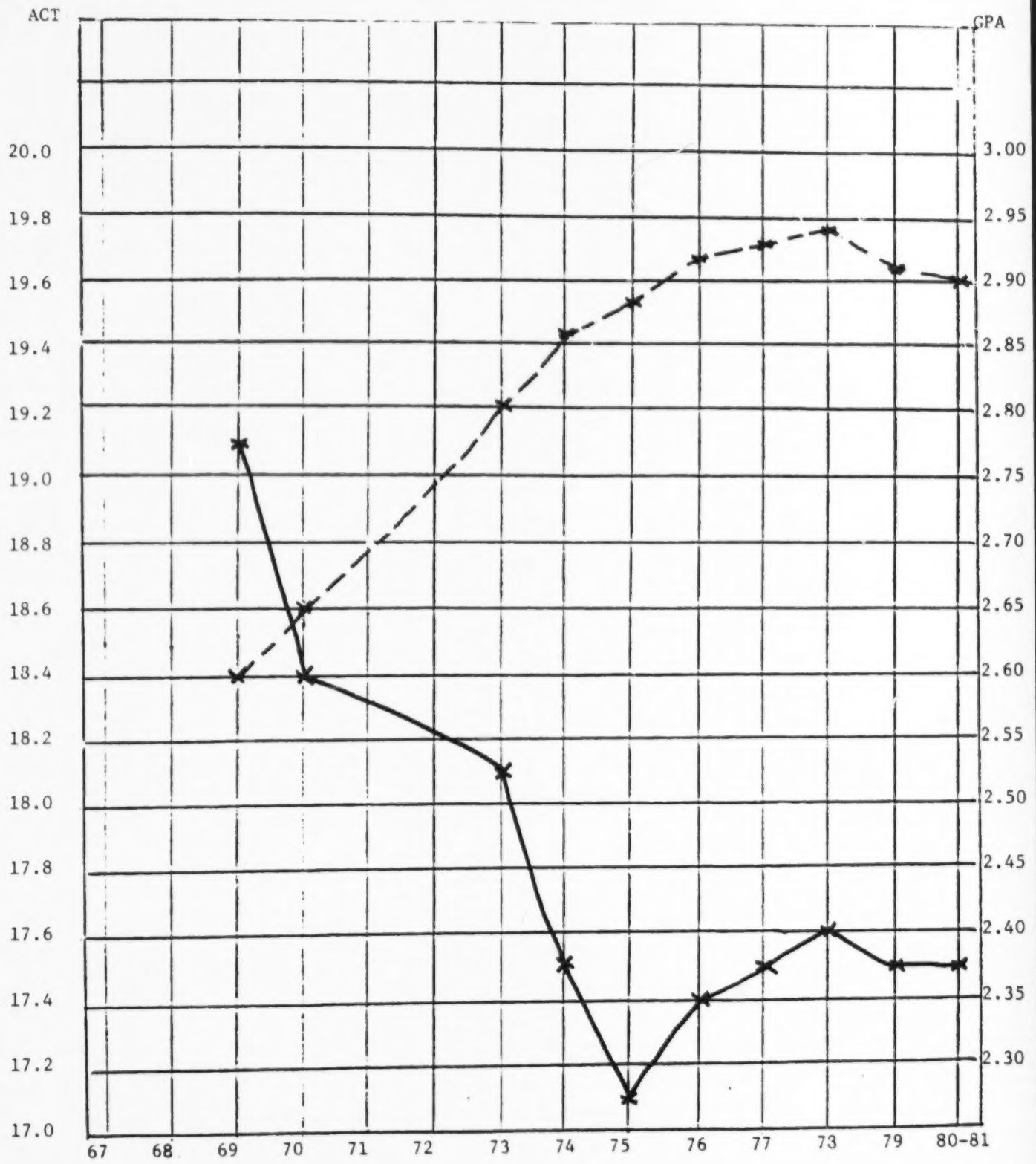
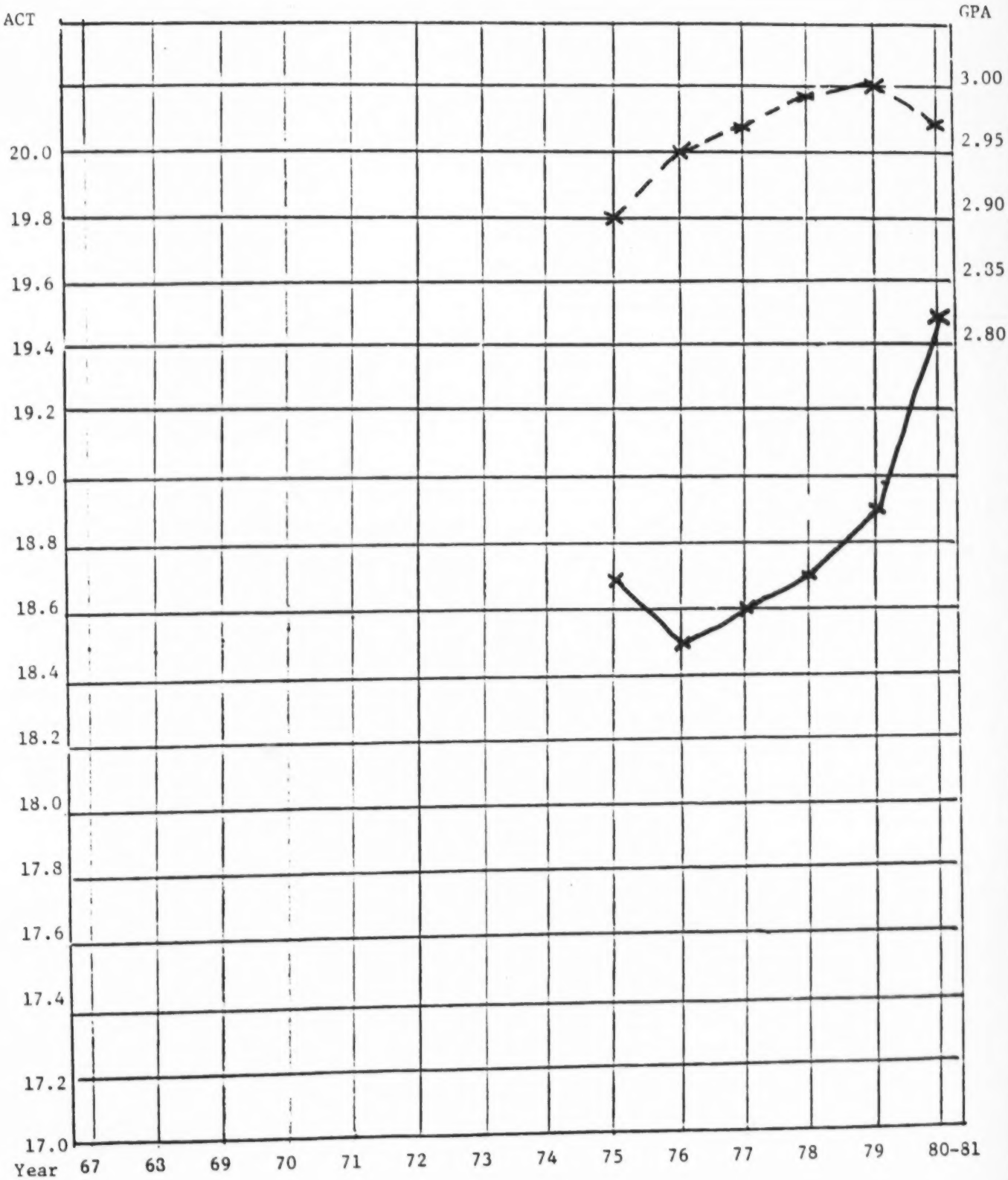


FIGURE 3

ACT TEST SCORE MEANS COMPARED WITH HIGH SCHOOL GPA FOR
10% NATIONAL SAMPLE OF HIGH SCHOOL STUDENTS



Tennessee High School Students showed an increase in GPA of 34 points, from 2.60 to 2.94 during the ten year period from 1969-70 to 1978-79. During that same time, the percent of students with GPA from 3.50 to 4.00 rose from 16% to 29%. Conversely, ACT score means dropped during the 1969-70 to 1975-76 period from 19.1 to 17.1, two full points. Since that time, it has fluctuated in the 17.4 to 17.6 area. The proportion of students scoring in the upper range of the ACT has not shown an appreciable change during the time studied, beginning with 11 per cent in the 26-36 range and ending with 10 percent.

Data on Memphis State University Freshmen were more complete, over a longer period of time, from 1967-68 to 1980-81. The ACT mean score moved from 19.8 in 1967-68 to 17.9 in 1980-81. Note, however, that the movement was erratic with scores reaching 19.9 in 1974-75 before making the definite downward move during the last six years.

The expected rising HSGPA was found to move from 2.45 to 2.83 during the period, with the highest GPA of 2.91 reached in 1975-76. While the movements are converse to the movement of the ACT, they do not always move in parallel. The converse nature of these changes is shown more clearly in Figure 1 than by the data in Table 1. The solid lines of ACT score means shows the erratic nature of the first eight years, then the downward movement, while at the same time, the broken lines of GPA scores moved steadily upward for nine years before leveling off during the last five years.

General observation of the last three years of ACT mean scores and HSGPA means show that they have leveled off and that the previous movements (in opposite directions) have stopped or reversed. New data on tests administered for 1981-82 have shown some slight increases in ACT

scores which give added support to the above observation (1). New data on HSGPA are not yet generally available but there has been no indication of any expected dramatic change.

Some of the factors identified in the literature as having affected test scores, might also be expected to affect grade point averages. There are changes in young peoples learning motivation. National spirit and self-esteem and sense of purpose, dispersal of learning activities and emphasis in the schools, more elective courses, diminished seriousness of purpose, impact of television, willingness of community and family to assume responsibility for what is taught and learned outside of the classroom, change in the role of the family in the educational process, disruption of life in this country during the seventies with intrusions ranging from Vietnam, Watergate, to Iranians captives (1).

References

1. Covington, Jimmie. "Last Year's City ACT Scores Increase Slightly", The Commercial Appeal, Memphis, TN,: Oct. 13, 1981, p. 17.

2. Jackson, Rex, Correlations of SAT with High School Record, New York: College Entrance Examination Board, 1977.

3. Milton, Ohmer and Edgerly, John W. The Testing and Grading of Students, New Rochelle, N. Y.: Change Magazine, 1977.

4. On Further Examination, Report of the Advisory Panel on the Scholastic Aptitude Test Score Decline, New York: College Entrance Examination Board, 1977.

5. Smith, Ray, Re-analysis of the ACT-HSGPA Study for 1972 Freshmen, Memphis, TN.: Memphis State University, 1973.

6. The High School Profile Report, 1975-76, Iowa City: American Colleges Testing Program Research Services, 1976.

7. The High School Profile Report, 1969-81 State Composite for Tennessee Series, Iowa City: American College Testing Program.

8. The High School Profile Report, 1967-68 through 1980-81, Memphis State University - Enrolled, Series, Iowa City: American College Testing Program.

9. The High School Profile Report, 1975-81 National Norms 10% Sample Series, Iowa City: American College Testing Program.